ORGANIZATION *and* STAFFING

for

FULL-TIME LOCAL HEALTH SERVICES

December 31, 1953

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service

ORGANIZATION *and* STAFFING *for* FULL-TIME LOCAL HEALTH SERVICES

Analysis of information
submitted to the
Public Health Service
in
REPORT OF PUBLIC HEALTH PERSONNEL
as of December 31, 1953

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INTRODUCTION

Since 1946 health organizations providing full-time local health services under the direction of a full-time health officer and receiving Federal or State assistance have completed the "Report of Public Health Personnel, Facilities, and Services."[1/] Beginning with 1953, the report was limited to identification and coverage of the health organization and to the number of full-time personnel of various categories employed by the official health agency and by official agencies other than the health agency engaged in public health services in the jurisdiction. Data previously included on selected facilities and services available in the reporting jurisdiction were not requested. This analysis is therefore confined to coverage and personnel information reported by 1,389 full-time local health units as of December 31, 1953.

Current definitions of a full-time local health unit and a full-time health officer are as follows:

> A full-time local health unit is defined as one which is officially organized to provide medical, nursing, and sanitation public health services during all of the regularly scheduled work week of the governmental unit to which it is attached and which is under the direction of a full-time health officer or other designated full-time administrative head.
>
> A full-time health officer is defined as one who is officially designated to direct the activities of a health department and who is paid to so function during all of the regularly scheduled work week of the governmental unit to which the department is attached.

The fact that a health department meets the above requirements and qualifies as a full-time unit in no way reflects the quality or adequacy of health services provided under its health program. Rather it is indicative that an official organization has been established with arrangements for basic public health services to be made available on a continuing basis under the guidance of an officially appointed designated health officer or administrative head.

The terms "organization," "unit," "jurisdiction," and "department" are used synonymously throughout the analysis which is presented in two sections. These sections are as follows:

(1) Extent of Coverage by Full-Time Local Health Organizations,
(2) Personnel Engaged in Local Public Health Programs.

1/ Analysis of data reported for 1946, 1947, 1949, 1950, 1951, and 1952 available in published form. Data reported for 1948 unpublished.

EXTENT OF COVERAGE BY FULL-TIME LOCAL HEALTH ORGANIZATIONS

According to the most complete information available to the Public Health Service on local health organization, there are 1,434 health units organized to provide local health services.[1] These units serve 2,218 counties, include 264 city health departments, and cover areas with a combined population of almost 142 million people. Coverage information compiled from reports submitted corresponded very closely with these data, the number of units from which reports were not received amounting to slightly less than 50. This group of nonreporting units comprised for the most part city health departments which do not receive Federal or State aid and, therefore, are not required to report although encouraged to do so on a voluntary basis.

The 1,389 local health organizations which submitted the Report of Public Health Personnel (Form 803) included 2,229[2] counties--approximately 73 percent of the total counties in the country--and 227 cities. The combined population residing in these organized areas totaled 141,758,000, or 88.8 percent of the total estimated population of the country.[3] Areas not included in reporting jurisdictions comprised 839 counties, or approximately 27 percent of the 3,068 counties in the country, in which nearly 18 million people reside. Although some type of community organization for providing public health services may be operative in a number of these areas, it is presumed that either the organization does not meet the requirements specified with respect to provision of services and direction of operation or is not among units receiving Federal or State aid and therefore not required to report.

Comparison with data reported as of December 31, 1952, reveals an increase in 1953 of 76 reporting units serving 22 additional counties and 12 more city health departments. It should be mentioned that approximately half the apparent growth between these years in number of units was the result of a shift in counties in one State from the local health district type of organization to the single county classification.

The extent of growth shown may be considered somewhat characteristic of the progress between years in the establishment of local health organizations during the past decade. Extended coverage of the country by some type of health organization has occurred sporadically, with significant

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1/ Directory of Full-Time Local Health Units, 1954 Revision. PHS Publication No. 118.

2/ Includes 14 counties in Pennsylvania in which services are not provided to all areas within the county. These counties were not included in compilation of county coverage of the Directory of Full-Time Local Health Units.

3/ Estimated as of January 1, 1954. 1950 Census data extrapolated to January 1, 1954, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1953.

gains being made between 1935 and 1950. However, the rate of expansion has declined during the past few years. (See the Appendix.)

Areas Reporting Full-Time Local Health Service

The 1,389 reporting health organizations in the continental U. S. were located in 47 States and the District of Columbia. No reports were received from Vermont since that State has no full-time local health departments.

There are four distinct types of health organizations providing local services. These are as follows:

1. Single county units - serve a single county and may or may not serve the city or cities therein, depending upon the existence of separate city health units.

2. City health departments - serve a single city. In three instances such departments serve a total of seven entire counties because of conterminous boundaries. These cities are New York (serving five counties), Philadelphia, and New Orleans.

3. Local health districts - serve two or more counties or other types of local governmental units. In such districts contiguous counties or municipalities have combined their resources and formally organized a single operating health unit with control vested in local authority and directed by one health officer or administrative head.

4. State health districts - organized either for providing direct local services or for providing advisory and supervisory services to various types of local governmental units. In such districts, control is vested in the State.

Although the trend has been toward the organization of health units on a district rather than a single county basis, the latter type of organization continues to be the most prevalent type of unit. Over the years, several States such as Alabama, Maryland, Louisiana, and South Carolina have adhered almost exclusively to the single county type of organization. In some other States, such as Arkansas, Florida, Georgia, Michigan, Mississippi, North Carolina, Tennessee, and Virginia, it has been found expedient and effective for adjacent counties to combine resources and establish multicounty or local health district organizations. Most frequently such combination has resulted in extended coverage; in some instances, however, county organizations operating independently have consolidated to strengthen the existent health program and permit joint use of available personnel. In

still other States, such as Delaware, Iowa, Maine, Massachusetts, Minnesota, New Mexico, Pennsylvania, Utah, and Wisconsin, the most dominant type of organization for local services continues to be the State health district, except for some organized city units within the State. Because of the large population and geographical area usually included in such districts, the direct services performed are generally limited in scope, services being confined to those deemed most essential to the public health program of the State.

Slightly more than 56 percent of all types of reporting organizations were of the single county type. (See table 1.) Approximately 35 percent of the counties with full-time local health service were reported as single county units, and one-third of the total estimated population of the country resided in these counties. As compared to the previous year, the number of single county units reporting increased by 87. However, a large portion of this increase resulted in a shift in Kentucky of counties from local health district organization to single county organization.

City health departments numbered 227, or 16 percent of the total number of units reporting, and served 29 percent of the estimated population of the country. There were 12 more independent city health departments reported in 1953 than in 1952.

As mentioned above, in some sections of the country, the district type of organization is found to be the most desirable pattern since this type of administrative unit may permit the rendering of health services to a greater number of communities more effectively and economically than would the single county type of organization. There were 272 units of the local health district type included among the reporting jurisdictions. These districts comprised about 20 percent of the aggregate units and 31 percent of the counties with local services. Because of organizational changes as mentioned above, a slight reduction was reflected between 1953 and 1952 in the number of units of this type reporting and the number of counties served. The estimated population of areas included in local health districts was nine percent of the total estimated population.

The other classification of district organization, that known as the State health district, included approximately 34 percent of the organized counties and 17 percent of the total population of the country. There was relatively little change within the year in the extent of coverage by organizations of this type.

Table 2 shows the coverage of each State according to population of the organized areas, number of organizations, and counties included. In 17 States and the District of Columbia, the entire population was reported covered by full-time health organizations, with control vested either in local authority or in the State. In 20 States, every county in the State was included among the organized areas, but some city areas within counties in 3 of these States were not covered.

Table 1.--Extent of Coverage of the Country by Health Organizations of Designated Types Reporting Full-Time Local Health Service December 31, 1953

Type of health organization	Full-time health organizations		Counties		Population[1]	
	Number	Percent	Number	Percent	Number	Percent
Total number of counties and population in U. S.	-	-	3,068	100.0	159,678,500	100.0
Total number of health organizations reporting, counties and population included	1,389	100.0	2,229	72.6	141,758,000	88.8
Single county	783	56.4	(783)	(25.5)	(53,578,500)	(33.6)
City health department	227	16.3	(7)[2]	(0.2)	(46,540,200)	(29.1)
Local health district	272	19.6	(684)	(22.3)	(14,416,700)	(9.0)
State health district (actual service and supervisory)	107	7.7	(755)[3]	(24.6)	(27,222,600)	(17.1)
Total number of counties and population without full-time health organization	-	-	839	27.4	17,920,500	11.2

1/ Estimated as of January 1, 1954. 1950 Census data extrapolated to January 1, 1954, with adjustments made on the basis of State totals as estimated by the Bureau of the Census as of July 1, 1953.

2/ These seven counties are served by city health departments, the county and city being conterminous. The cities involved are: New Orleans, New York (5 counties), and Philadelphia.

3/ Includes 14 counties in Pennsylvania in which services are not provided to all areas within the county.

Table 2.--Population of Reporting Areas in Each State Having Full-Time Local Health Service, Number of Health Organizations Represented, and Number of Counties Included
December 31, 1953

State	Total population	Areas reporting				Total counties in each State
		Population	Percent of total population	Number of health organizations	Number of counties included	
Totals	159,678,500[1/]	141,758,000[1/]	88.8%	1,389	2,229[2/]	3,068
Alabama	3,076,500	3,076,500	100.0	67	67	67
Arizona	922,000	763,500	82.8	8	7	14
Arkansas	1,845,500	1,716,000	93.0	27	65	75
California	12,359,500	12,039,500	97.4	52	43	58
Colorado	1,470,500	1,171,900	79.7	11	23	63
Connecticut	2,229,000	1,246,500	55.9	15	-	8
Delaware	356,500	356,500	100.0	4	3	3
Dist. of Columbia	865,500	865,500	100.0	1	-	-
Florida	3,346,000	3,317,000	99.1	40	66	67
Georgia	3,591,500	3,591,500	100.0	55	159	159
Idaho	601,000	373,300	62.1	5	21	44
Illinois	9,148,000	9,148,000	100.0	34	102	102
Indiana	4,205,000	4,205,000	100.0	15	92	92
Iowa	2,576,500	2,494,300	96.8	9	99	99
Kansas	2,022,000	1,009,700	49.9	15	16	105
Kentucky	2,926,500	2,809,800	96.0	117	117	120
Louisiana	2,846,500	2,797,600	98.3	60	60	64
Maine	887,500	887,500	100.0	10	16	16
Maryland	2,587,500	2,587,500	100.0	24	23	23
Massachusetts	4,951,500	4,951,500	100.0	21	14	14
Michigan	6,931,500	6,155,700	88.8	45	70	83
Minnesota	3,070,500	3,070,500	100.0	13	87	87
Mississippi	2,147,500	2,132,900	99.3	58	80	82
Missouri	4,097,000	3,828,700	93.5	35	114	114
Montana	628,500	164,400	26.2	5	8	56
Nebraska	1,362,000	500,500	36.7	4	4	93
Nevada	206,500	135,300	65.5	2	2	17
New Hampshire	524,500	80,900	15.4	1	-	10
New Jersey	5,235,000	5,235,000	100.0	80	21	21
New Mexico	765,000	765,000	100.0	10	32	32
New York	15,330,000	15,330,000	100.0	39	62	62
North Carolina	4,254,000	4,254,000	100.0	69	100	100
North Dakota	596,000	288,000	48.3	8	29	53
Ohio	8,586,500	8,586,500	100.0	74	88	88
Oklahoma	2,218,000	1,782,300	80.4	27	46	77
Oregon	1,643,000	1,429,600	87.0	17	21[3/]	36
Pennsylvania	10,733,500	5,016,200	46.7	28	16[3/]	67
Rhode Island	839,000	839,000	100.0	7	5	5
South Carolina	2,207,500	2,123,400	96.2	49	46	46
South Dakota	639,000	110,700	17.3	2	2	68
Tennessee	3,290,000	3,164,700	96.2	57	85	95
Texas	8,503,500	5,592,400	65.8	47	57	254
Utah	756,500	756,500	100.0	6	29	29
Vermont	374,000	*	*	*	*	14
Virginia	3,585,000	3,386,600	94.5	48	90	98
Washington	2,549,000	2,251,800	88.3	19	23	39
West Virginia	1,905,500	1,749,400	91.8	28	47	55
Wisconsin	3,563,500	3,563,500	100.0	20	71	71
Wyoming	322,500	55,900	17.3	1	1	23

1/ See footnote 1, table 1, page 4.

2/ Includes 7 counties which are served by city health departments, the county and city being conterminous. The cities involved are: New Orleans, New York (5 counties), and Philadelphia.

3/ Includes 14 counties in which services are not provided to all areas within the county.

* Vermont has no full-time health organizations rendering local health service.

A grouping of the States according to the percent of each State's population covered by full-time health organizations is presented below in table 3. The District of Columbia and the 17 States with all population residing in organized areas comprised 45 percent of the total population of the country, or 72 million people. In 18 other States, between 75 and 99 percent of the population resided in areas covered by some type of health organization. The population of these States totaled nearly 59 million and constituted about 37 percent of the national total. Thus, 82 percent of the population of the entire country resided in States in which 75 percent or more of the population lived in areas organized for local health service. On the other hand, there were 4 States with a combined population of 1,860,000, or about 1 percent of the population of the country, in which less than one-fourth of the residents had local health services available. Vermont is the State in which none of the population is covered by full-time local health organizations.

Table 3.--Percent of Each State's Total Population Covered by Full-Time Health Organizations, Arranged by Percentage Groups, Showing Number of States and Total Population of the States within Each Group December 31, 1953

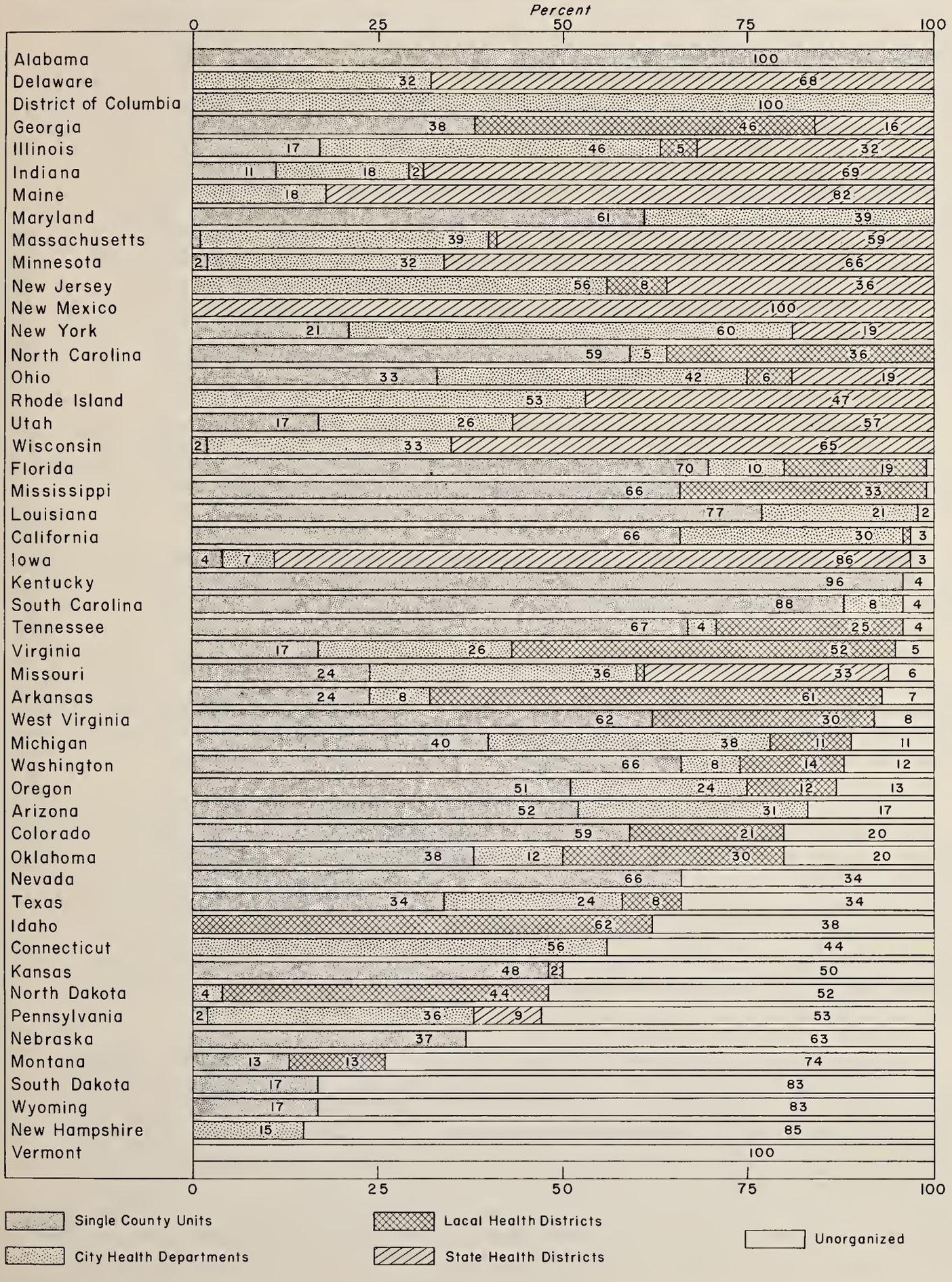
Percentage group	Number of States	Population1/	
		Number	Percent
Totals	49	159,678,500	100.0
None	1	374,000	0.2
1 - 24	3	1,486,000	0.9
25 - 49	5	15,342,000	9.6
50 - 74	4	11,540,000	7.2
75 - 99	18	58,867,000	36.9
100	18	72,069,500	45.2

1/ See footnote 1, table 1, page 4.

The general organizational pattern of local government influences the plan of health organization. Thus, there is wide diversity among the States in organization for public health coverage, as can be seen from figure 1. In this figure, there is shown for each State the proportion of the population served by the different types of health organizations. Twenty-four States had three or more types of health organizations providing local services. Eleven States had only one type of organization.

It is generally agreed that for the most economical operation, the minimum population of a health jurisdiction should not be less than 35,000

Figure 1-Percent of Each State's Total Population Covered by Various Types of Local Organization



and preferably should include at least 50,000 persons. Units serving smaller population groups cannot always support financially the professional and technical staff required to carry out basic health department services and responsibilities. As reflected in table 4, there is need for the development of local health units to serve more populous areas. A relatively high proportion of the reporting organizations--almost 36 percent--covered areas of less than 35,000 population. About half the single county units and approximately one-fourth of the city health departments and of the local health districts served areas in which less than 35,000 persons reside. An additional 19 percent of the health jurisdictions included populations between 35,000 and 50,000. Approximately one-third of the local health districts and nearly five percent of the State health districts were in this population grouping. Although many units of the district type frequently comprise three or more counties or municipalities, when all units with less than 50,000 persons are combined they constitute more than 54 percent of all reporting jurisdictions.

Slightly less than one-fourth of the reporting units were represented in the 50,000 to 100,000 population group. The proportion of local health districts within this grouping was higher than that shown for other types of reporting organizations.

Only 14 percent of all reporting units had populations of between 100,000 and 250,000. Nearly half of the State district units were included in this population interval.

Relatively few jurisdictions included populations exceeding 250,000. Organizations comprising the two groups--250,000 to 500,000 and 500,000 or over--amounted to less than eight percent of the total units reporting. As would be expected, State health districts had the largest representation in these two higher population intervals.

Land area of the jurisdiction, as well as population, is a very significant factor in the operation of health departments on an effective and economical basis. This factor quite frequently constitutes a problem when giving consideration to the combination of local governmental areas to form an organized framework for full-time public health service. The expanse of an area containing the desirable minimum population may be too large to permit an efficient operation; it is well recognized that a compact area affords better utilization of personnel, curtails transportation problems, and requires lower operating costs.

Table 5 gives a breakdown of the various types of full-time organizations according to land area. Almost three-fourths of the reporting units--specifically 72.6 percent--had land areas of less than 1,000 square miles. (Included within this grouping are the 227 reporting cities in which land area has no particular significance.) The population of these jurisdictions amounted to approximately 67 percent of the total population residing in organized areas. Single county units made up a large proportion of the organizations serving areas of less than 1,000 square miles; 660 of the 783 single county units were in this group. Of the 272 local health districts,

Table 4.--Distribution of Full-Time Health Organizations, by Type of Organization, and by Designated Population Groups
December 31, 1953

Population group[1/]	Total organizations		Single county		City health department		Local health district		State health district	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Totals	1,389	100.0	783	100.0	227	100.0	272	100.0	107	100.0
Under 35,000	495	35.6	369	47.1	56	24.7	69	25.4	1	0.9
35,000 - 50,000	261	18.8	138	17.6	30	13.2	88	32.3	5	4.7
50,000 - 100,000	329	23.7	160	20.5	63	27.8	96	35.3	10	9.3
100,000 - 250,000	197	14.2	84	10.7	43	18.9	19	7.0	51	47.7
250,000 - 500,000	67	4.8	20	2.6	18	7.9	-	-	29	27.1
500,000 or over	40	2.9	12	1.5	17	7.5	-	-	11	10.3

1/ See footnote 1, table 1, page 4.

Table 5.--Distribution of Full-Time Health Organizations of Different Types According to Land Area December 31, 1953

Area in square miles	Population represented[1/]	Full-time health organizations of designated types					
		Total organizations		Single county	Local health district	City health department	State health district
		Number	Percent				
Totals	141,758,000	1,389	100.0	783	272	227	107
Under 1,000	94,711,500	1,008	72.6	660	100	227	21
1,000 - 2,499	20,200,500	229	16.5	87	125	-	17
2,500 - 3,999	6,430,300	49	3.5	14	25	-	10
4,000 - 5,499	3,708,200	24	1.7	9	7	-	8
5,500 - 6,999	5,666,300	25	1.8	4	6	-	15
7,000 - 8,499	2,538,600	12	0.9	3	3	-	6
8,500 - 9,999	4,138,600	17	1.2	3	2	-	12
10,000 or over	4,364,000	25	1.8	3	4	-	18

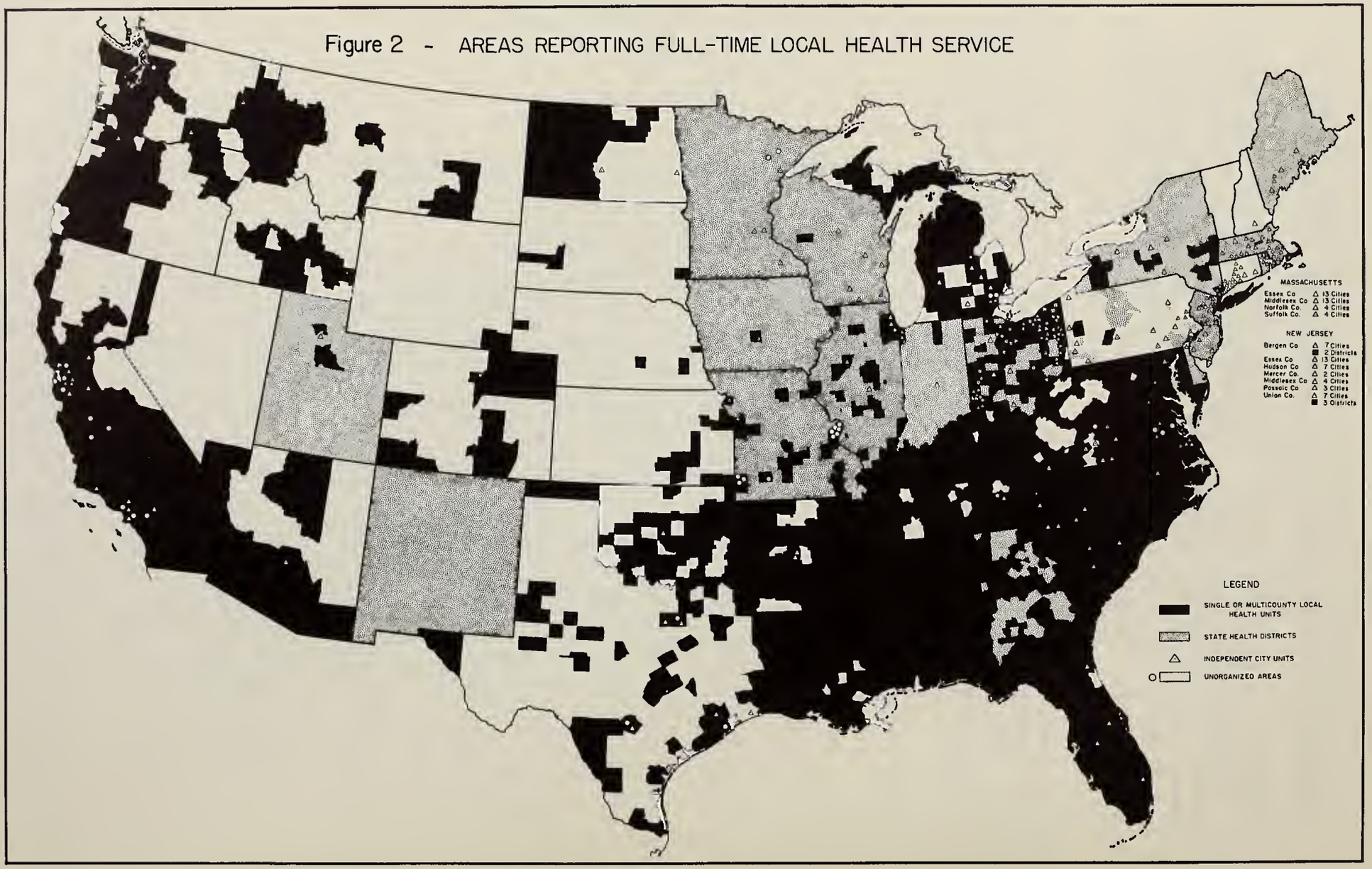
1/ See footnote 1, table 1, page 4.

100 served areas encompassing less than 1,000 square miles. Twenty-one of the 107 State health districts also were in this land area grouping.

Approximately 17 percent of the total organizations covered areas of between 1,000 and 2,500 square miles. Represented in the land area groupings ranging from 2,500 to 10,000 were 127 units serving more than 22 million persons. Fifty-one of these units were State health districts. Only 25 jurisdictions, or less than 2 percent, included areas of 10,000 square miles or more. Eighteen of these organizations were State health districts.

Areas in the country covered by some type of health organization providing public health services are shown in figure 2. It is readily apparent from this map that little progress has been made in certain sections of the country in establishing health organizations, particularly in the Rocky Mountain area, the Southwest, and in some sections of New England.

Figure 2 - AREAS REPORTING FULL-TIME LOCAL HEALTH SERVICE



PERSONNEL ENGAGED IN LOCAL PUBLIC HEALTH PROGRAMS

As of December 31, 1953, there were 46,776 full-time public health workers employed by official agencies. These agencies included full-time local health units and other governmental agencies such as boards of education and welfare departments which engage in local public health work. Represented in this count were 305 public health nurses employed by voluntary agencies and working full time under contract for official health agencies. No other personnel data are requested with respect to nonofficial agencies.

Personnel of official health agencies and those performing health services under the administration of other official agencies are discussed separately. When making comparative analysis from year to year, shifts in personnel from official health agencies to other official agencies, and vice versa, are sometimes indicated. It is presumed that some of this shifting results from misinterpretation of instructions rather than from transfer of personnel and activities.

Personnel Employed by Official Health Agencies

Distribution of Personnel Among States

The number of full-time employees of official health agencies (full-time local health units) totaled 37,514, including the 305 nurses in voluntary agencies working under contract as mentioned above. Two-thirds of these public health workers were reported by local official health agencies of 13 States, each of which employed at least 1,000 full-time workers. These States are as follows: New York, California, Ohio, Michigan, Illinois, New Jersey, Texas, Pennsylvania, Georgia, Massachusetts, North Carolina, Maryland, and Florida. Local health jurisdictions in these States included 60 percent of the country's population with full-time local health service. On the other hand, less than 100 full-time public health workers were employed by local official health agencies in each of 7 States. Health organizations in these States served slightly less than one percent of the population residing in areas organized for full-time local health service.

The number of workers reported in 1953 represents an increase of 478 over the number reported in 1952. This increase was distributed among 24 States, 12 of which had no more local health units reporting in 1953 than in 1952.

Table 6 summarizes by State and by personnel classification the number of persons employed on a full-time basis by official health agencies providing local health services. Rather extensive professional and technical skills are represented on the full-time staffs of local health departments. However, almost one-third of the total number of employed workers were reported in the nonprofessional and nontechnical categories. Wide variation is evident in the size of each employee group.

Table 6.--Number of Full-Time Personnel of Different Classifications Employed by Official Health Agencies in Local Areas with Full-Time Health Organization
December 31, 1953

State	Total	Public Health Physicians	Public Health nurses	Clinic nurses	Public Health Dentists	Dental hygienists	Engineers	Professional sanitarians	Other sanitation personnel	Veterinarians	Laboratory personnel	Health educators	Nutritionists	Medical social workers	Psychiatric social workers	Psychologists	Analysts and statisticians	Public health investigators	X-ray technicians	Physical therapists	Administrative management personnel	Clerks	Maintenance and Service Personnel	All others
Totals	37,514[1/]	1,482	12,574[1/]	564	236	367	396	4,313	2,619	328	1,325	276	101	128	64	41	168	388	335	115	368	8,288	1,784	1,254
Alabama	632	38	195	4	1	1	3	110	43	15	15	2	-	-	3	-	1	5	1	-	2	140	40	13
Arizona	127	5	42	9	-	-	1	14	16	1	3	1	-	-	1	-	-	1	3	-	-	25	3	2
Arkansas	234	7	90	3	-	-	-	56	-	1	1	1	-	-	-	-	-	1	-	-	-	74	-	-
California	3,818	179	1,089	171	14	12	19	656	80	6	164	37	10	32	4	4	29	59	37	23	29	908	157	99
Colorado	348	11	142	1	-	-	3	57	25	3	12	2	-	1	-	-	2	2	1	2	2	65	5	12
Connecticut	383	21	165	6	2	26	3	22	28	3	15	2	-	-	-	-	1	3	4	-	5	69	5	3
Delaware	104	4	47	-	-	5	-	16	1	-	3	-	-	-	-	-	1	13	-	-	-	14	-	-
Dist. of Columbia	685	43	127	-	10	16	7	78	-	11	20	3	1	28	7	5	4	7	6	8	14	161	100	29
Florida	1,013	46	331	15	4	1	9	90	140	2	6	20	-	-	2	4	4	15	8	-	13	192	37	74
Georgia	1,259	43	446	45	3	7	29	133	19	9	20	1	8	5	4	5	3	20	15	1	2	279	64	98
Idaho	86	1	44	2	-	-	-	12	-	-	5	-	-	-	-	-	-	3	-	-	-	16	3	-
Illinois	1,549	77	527	12	46	6	28	18	190	10	75	13	7	-	2	1	4	45	20	2	7	325	36	98
Indiana	482	10	219	4	-	-	12	44	69	-	10	6	4	-	-	-	2	4	1	1	2	70	15	9
Iowa	204	2	150	-	-	-	8	19	4	-	1	1	-	-	-	-	-	1	-	-	-	17	1	-
Kansas	248	9	87	4	1	-	5	63	4	1	5	1	-	1	1	-	-	3	1	-	2	47	12	1
Kentucky	688	35	202	10	2	1	1	7	147	-	23	2	-	-	-	-	2	2	4	-	22	209	19	-
Louisiana	764	29	187	15	-	2	-	141	36	4	-	4	1	2	-	-	-	24	11	-	1	200	78	29
Maine	141	9	64	-	1	6	6	6	12	-	2	2	2	1	1	3	-	-	2	-	1	21	-	2
Maryland	1,031	42	387	19	4	4	12	116	32	8	51	5	2	5	8	4	7	9	8	4	19	250	26	9
Massachusetts	1,232	38	481	7	30	56	11	63	156	2	34	9	11	11	1	-	2	8	10	7	32	189	53	21
Michigan	1,667	61	660	9	21	5	24	102	191	51	62	14	6	1	1	-	9	12	15	2	7	354	24	36
Minnesota	403	15	167	-	4	4	11	52	13	2	11	3	-	3	1	-	2	1	-	-	2	98	9	5
Mississippi	573	43	203	-	-	1	-	94	11	1	7	7	-	-	-	-	-	-	1	-	-	132	45	28
Missouri	755	25	176	5	4	1	28	66	120	14	20	1	1	2	4	3	-	7	8	-	5	195	36	34
Montana	45	5	24	1	1	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-
Nebraska	114	2	35	1	2	-	3	25	4	-	10	3	-	-	-	-	3	1	-	-	1	21	2	1
Nevada	23	2	7	1	1	-	-	-	7	-	1	-	-	-	-	-	-	-	-	-	-	3	1	-
New Hampshire	31	1	14	-	1	-	-	4	-	1	1	-	-	-	-	-	-	-	-	-	-	2	7	-
New Jersey	1,513	16	586	26	7	6	5	147	170	10	55	6	1	4	-	-	7	41	4	4	62	259	73	24
New Mexico	142	9	51	4	-	-	-	27	-	-	-	-	-	-	-	-	-	2	2	-	-	47	-	-
New York	6,317	151	1,987	19	34	185	75	495	301	40	300	49	29	16	6	6	59	6	75	55	57	1,599	487	286
North Carolina	1,170	68	463	26	7	-	7	186	27	6	33	18	1	-	3	2	1	20	6	-	9	224	41	22
North Dakota	68	2	35	-	-	-	4	13	-	2	1	-	-	-	-	-	-	-	-	-	2	9	-	-
Ohio	1,812	98	605	22	3	2	23	292	149	51	57	17	7	3	-	-	4	12	5	-	18	364	54	26
Oklahoma	365	27	129	2	2	-	1	81	11	1	12	2	-	-	-	-	-	2	2	-	-	82	9	2
Oregon	359	21	152	5	-	1	-	61	1	9	7	3	-	-	1	1	-	1	2	-	2	66	9	17
Pennsylvania	1,295	39	389	13	4	2	16	69	160	18	68	8	2	2	-	-	10	9	18	2	14	315	79	58
Rhode Island	128	4	45	1	-	1	1	11	13	1	6	-	-	-	-	-	2	-	1	1	1	23	2	15
South Carolina	523	30	182	15	1	3	1	105	17	3	9	5	-	-	-	-	-	10	5	-	2	109	20	6
South Dakota	20	-	4	-	-	-	-	5	1	-	6	-	-	-	-	-	-	-	-	-	-	4	-	-
Tennessee	841	40	259	12	6	1	5	154	23	1	24	8	1	1	-	-	1	5	19	-	2	210	40	29
Texas	1,378	51	263	33	6	1	18	154	243	23	65	6	1	4	4	-	5	11	11	-	5	281	79	114
Utah	215	2	115	2	-	-	-	57	2	2	7	1	-	-	-	-	-	1	1	-	5	20	-	-
Vermont	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Virginia	981	55	303	9	10	-	1	181	33	2	31	2	-	2	2	1	2	17	10	3	5	228	70	14
Washington	674	23	240	22	-	-	-	124	20	5	32	5	1	3	5	1	-	2	12	-	4	134	18	23
West Virginia	266	12	92	5	1	-	2	59	5	2	1	1	-	1	3	1	-	3	1	-	7	64	5	1
Wisconsin	800	30	363	4	3	11	14	19	95	7	34	5	5	-	-	-	1	-	5	-	5	166	19	14
Wyoming	8	1	3	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-

1/ Includes 305 public health nurses, employed by voluntary agencies, under contract to provide service to the official health agency.

* Vermont has no full-time health organizations rendering local health service.

Of the professional groups, the nursing group was by far the largest. Public health nurses numbered 12,574 and constituted almost one-third of all personnel. In addition, there were 564 clinic nurses employed by official health agencies. Despite some gain in nursing personnel in recent years, public health nurses continue as the most acute staffing deficiency in the majority of health units. Very slight gain occurred between 1952 and 1953 in the number of such personnel employed by local official health agencies, the net growth amounting to less than 100. A loss in public health nurses was reflected in as many as 22 States during the year. Slight decrease was evidenced between 1952 and 1953 in the total number of clinic nurses serving full time in local areas.

Full-time public health physicians, who constituted considerably less than five percent of the overall staff of official health agencies, decreased by 20 between 1952 and 1953. Reports from the majority of States showed the number of physicians employed in 1953 to be about the same as or slightly less than the number employed in 1952.

Sanitation personnel increased by 112 to a combined total of 7,656. Within the general category of sanitation workers, included are engineers, veterinarians, professionally trained sanitarians, and nongraduate personnel engaged in general sanitation activities. In total, sanitation workers represented over 20 percent of all official health agency personnel and comprised the second largest group of professional or technical public health workers in local areas. The 396 engineers serving in local units were employed in 34 States. Professional sanitarians employed by reporting units numbered 4,313 and constituted the largest proportion of the personnel responsible for community sanitation. "Other sanitation" workers totaled 2,619. Inconsistent reporting prevents accurate comparison with the previous year of the number of professional sanitarians and "other sanitation" personnel employed in each of these categories. In a few States, it is apparent that local units report certain sanitation personnel under professional sanitarians one year and the following year reverse this procedure by reporting the same personnel under "other sanitation" personnel. There were 328 veterinarians employed by local units in 36 States at the close of 1953, approximately the same number as the year before.

Laboratory personnel represented about 3.5 percent of the total staff of official health agencies. However, in the past several years the trend in employment of this category of public health worker generally has been downward, probably as a result of the further development of branch laboratories of State health departments which provide service to local areas. At the end of 1953, the number of laboratory workers totaled 1,325 which was about the same number as reported the previous year.

Although many local health departments have been broadening their programs to include more than the traditional public health services, slow progress is reflected in the addition of various specialized professional and technical personnel to their full-time staffs to provide more extensive services. For example, reports from local health jurisdictions in only 31 States showed the employment of dentists on a full-time basis, and they

numbered only 236. Dental hygienists totaled 367 and, although reported in 27 States, half these workers were employed in the State of New York. Such personnel as health educators, nutritionists, medical and psychiatric social workers, psychologists, X-ray technicians, and physical therapists were reported in relatively few numbers and the distribution of most of these personnel categories was confined to relatively few States. Their representation changed only slightly from the previous year.

Clerical workers numbered about the same as in 1952 and constituted more than one-fifth of the entire staff. Local health organizations of New York and California alone reported slightly more than 30 percent of all clerical workers.

Distribution of Personnel by Type of Local Health Organization

Table 7 shows the distribution of personnel, according to classification, among the four types of health organizations. City health departments which accounted for one-third of the population covered by full-time health departments employed 45 percent of the total, or 17,170 workers. Single county units reported the second largest number of employees, the total amounting to 13,759. The population served by organizations of this type was 38 percent of the total population with full-time local health service. Staffs of local health districts and State health districts comprised 3,313 and 3,272 full-time employees, respectively. These organizations served approximately 30 percent of the population with full-time local health coverage and encompassed almost two-thirds of the counties with local health service.

The proportion of workers in the individual categories employed by each type of organization varied widely. Single county units reported the largest number of each the following: Physicians, clinic nurses, engineers, professional sanitarians, physical therapists, psychologists, and psychiatric social workers. Except for these groups of public health workers, city health departments accounted for the highest proportion of workers reported in each category.

In general, the data indicate that health organizations serving communities with sizable populations employ a much wider range of professional and technical personnel and a much greater proportion of workers in specialized fields than those serving sparsely populated areas. City health departments, which usually provide more specialized health services than other types of organizations, reported approximately 60 percent of the dentists, 70 percent of the dental hygienists, 67 percent of the veterinarians, 64 percent of the laboratory workers, 54 percent of the X-ray technicians, 53 percent of the nutritionists, 50 percent of the medical social workers, and 47 percent of the health educators.

Comparison of 1953 personnel data on an organizational basis with that reported for 1952 reveals that both local health district and State health

Table 7.--Full-Time Personnel of Different Classifications Employed by Official Health Agencies, Arranged by Type of Local Health Organization
December 31, 1953

Type of personnel	Total official health agency personnel	Number of personnel by type of organization			
		Single county	City health department	Local health district	State health district
All types	37,514 1/	13,759	17,170	3,313	3,272
Public health physicians	1,482	700	509	183	90
Public health dentists	236	69	145	12	10
Dental hygienists	367	59	260	4	44
Public health nurses	12,574 1/	4,712	4,823	1,314	1,725
Clinic nurses	564	285	238	29	12
Sanitation personnel:					
Engineers	396	160	102	13	121
Veterinarians	328	82	221	8	17
Professional sanitarians	4,313	1,874	1,714	499	226
Other	2,619	805	1,537	121	156
Laboratory personnel	1,325	401	843	40	41
Health educators	276	106	131	19	20
Nutritionists	101	18	53	1	29
Medical social workers	128	52	65	1	10
Psychiatric social workers	64	44	15	4	1
Psychologists	41	25	8	5	3
Analysts and statisticians	168	48	118	2	-
Public health investigators	388	131	195	27	35
X-ray technicians	335	127	180	12	16
Physical therapists	115	39	38	3	35
Administrative management	368	96	202	28	42
Fiscal and clerical	8,288	3,003	3,861	823	601
Maintenance, custodial, and service	1,784	539	1,107	115	23
All others	1,254	384	805	50	15

1/ Includes 305 public health nurses employed by voluntary agencies under contract to provide service to official health agencies.

district staffs declined during the year. This decrease in part resulted from 21 fewer units being reported in the local health district classification and 2 fewer units being reported in the State health district classification. Single county units and city health departments, both of which gained in number of units reporting in 1953, showed increase in staff over 1952. As compared to the previous year, a total of 634 additional workers were employed in single county units at the close of 1953, and 88 additional employees were reported in city health departments.

Although some growth in the full-time staffs of local health departments has been evidenced during the past few years, the increases are not proportionate to the growth in population occurring within these years. More detailed consideration of the staffing situation in reporting jurisdictions reveals that the ratios of full-time personnel to population residing in organized areas are very low and are steadily decreasing. Thus, official health agencies must continue to concentrate attention on more effective and wider utilization of presently employed personnel. Continued study and appraisal of this administrative problem is warranted. Many services and functions performed by professional personnel might well be assigned to administrative personnel.

The ratio of full-time public health workers employed by all four types of health organizations was 26.5 per 100,000 population in 1953 as compared to 31.3 in 1950. In the year 1950 the public health physician-population ratio of reporting health organizations was 1.5, whereas in 1953 it dropped to 1.0. Comparable ratios for nurses and sanitation personnel were as follows: Nurses, 10.4 in 1950 against 8.9 in 1953; sanitation personnel 6.5 in 1950 against 5.4 in 1953.

In city health departments, the personnel-population ratio was considerably higher than the national figure, the ratio amounting to nearly 37 workers per 100,000 population. In each of the other three types of health jurisdictions, the ratio was lower than the national figure. (See table 8.)

Except in State health districts, the physician ratio was quite uniform among the four types of health organizations. County health units and local health districts each had a slightly higher ratio than the national ratio, or 1.3 physicians per 100,000 population; the ratio for city health departments was slightly less, with 1.1 physicians per 100,000, and for State health districts only 0.3 physicians per 100,000 population.

In all other personnel categories, city health departments employed as high a proportion or a larger percentage of workers in relation to population than did other types of organizations. The ratio of nurses was 10.4 per 100,000 population in city health organizations, 9.1 in local health districts, 8.8 in single county units, and 6.3 in State health districts. City health departments employed 7.7 sanitation workers per 100,000 population while State health districts employed only 1.9 persons of this occupational group per 100,000 population served. The ratio of clerks varied from 8.3 in cities to 2.2 in State health districts. For the more specialized types of health workers, the ratio of each category employed by all types of health units was extremely low.

Table 8.--Ratio of Official Health Agency Personnel to Population Covered by Reporting Full-Time Local Health Organizations of Different Types
December 31, 1953

Type of personnel	Number of workers per 100,000 population covered by designated types of organizations				
	All types	Single county	City health department	Local health district	State health district
All types	26.5	25.7	36.9	23.0	12.0
Public health physicians	1.0	1.3	1.1	1.3	0.3
Public health dentists	0.2	0.1	0.3	0.1	*
Dental hygienists	0.3	0.1	0.6	*	0.2
Public health nurses	8.9	8.8	10.4	9.1	6.3
Clinic nurses	0.4	0.5	0.5	0.2	*
Sanitation personnel:	5.4	5.5	7.7	4.5	1.9
Engineers	(0.3)	(0.3)	(0.2)	(0.1)	(0.4)
Veterinarians	(0.2)	(0.2)	(0.5)	(0.1)	(0.1)
Professional sanitarians	(3.0)	(3.5)	(3.7)	(3.5)	(0.8)
Other	(1.9)	(1.5)	(3.3)	(0.8)	(0.6)
Laboratory personnel	0.9	0.7	1.8	0.3	0.1
Health educators	0.2	0.2	0.3	0.1	0.1
Nutritionists	0.1	*	0.1	*	0.1
Medical social workers	0.1	0.1	0.1	*	*
Psychiatric social workers	*	0.1	*	*	*
Psychologists	*	*	*	*	*
Analysts and statisticians	0.1	0.1	0.2	*	-
Public health investigators	0.3	0.3	0.4	0.2	0.1
X-ray technicians	0.2	0.2	0.4	0.1	0.1
Physical therapists	0.1	0.1	0.1	*	0.1
Administrative management	0.3	0.2	0.4	0.2	0.2
Fiscal and clerical	5.8	5.6	8.3	5.7	2.2
Maintenance, custodial, and service	1.2	1.0	2.4	0.8	0.1
All others	0.9	0.7	1.7	0.3	0.1

* Less than 0.05. In each column these items total to 0.1.

Full-Time Personnel of Four Basic Classes Related to Minimum Staffing Requirements

Despite the fact that the concept of the services of local health departments is undergoing change, certain types of personnel are considered essential to the operation of the minimum generalized health program of a community. Traditionally, this personnel nucleus in a local health department consists of one or more workers of the following categories: Physician, nurse, sanitarian, and clerk. While other types of personnel complement this basic team, no standards have been established with respect to the minimum number required for basic service as related to the population to be served. The minimum staffing requirements generally accepted for physicians, nurses, sanitarians, and clerks are as follows:

1 public health physician for every 50,000 persons (a minimum of 1 for every local health unit regardless of population),
1 public health nurse for every 5,000 persons,
1 sanitary engineer or sanitarian for every 15,000 persons,
1 clerk for every 15,000 persons.

The above requirements were used as a guide in determining the extent of availability of each of the above types of personnel and, inversely, of personnel deficiencies in these categories. On an individual unit basis, the number of employees of each type was related to the population of the jurisdiction. Although it is recognized that other factors contribute to the personnel requirements, such as comprehensiveness of services provided, characteristics of the community, and the specific health needs, the reported data are not sufficiently inclusive to permit an analysis based on factors other than population.

In table 9 there is shown for the four primary types of personnel, the number and percent of reported units, counties, and cities with at least the recommended minimum, with some personnel of each type but less than the minimum, and with no personnel of each specified class.

Only 40 percent of the units met the minimum requirement of at least 1 public health physician for every 50,000 persons or at least one for every unit, regardless of population. Although not reported, physicians are employed on a part-time basis in many departments to supplement the full-time staff. It is recognized that this practice results in variance in actual physician requirements. Counties more frequently had enough physicians on the staff than did cities because of the wide use of part-time physicians by city health departments. Only one-fourth of the cities and one-third of the counties met the minimum physician requirement. A relatively large number of units were without any full-time physician, the proportion amounting to 30 percent of all reporting units; for cities and counties the respective percentages were as high as 40 and 35 percent. In a sizable number of city units, nonmedical health officers are employed, and medical services are supplied through the use of part-time physicians or on a contract basis.

Table 9.--Relationship to Recommended Minimum Staffing Requirements[1] of Full-Time Health Agency Personnel Employed in Areas Reporting Full-Time Local Health Service[2]
December 31, 1953

Type of personnel	Number and percent of reported units, counties, and cities with--					
	Sufficient personnel		Some personnel but not enough		No personnel of specified class	
	Number	Percent	Number	Percent	Number	Percent
Physicians:						
Units	563	40.5	406	29.2	420	30.3
Counties	745	33.5	697	31.4	779	35.1
Cities	58	25.5	78	34.4	91	40.1
Nurses:						
Units	74	5.3	1,271	91.5	44	3.2
Counties	54	2.4	2,137	96.2	30	1.4
Cities	24	10.6	184	81.0	19	8.4
Sanitation personnel:						
Units	536	38.6	786	56.6	67	4.8
Counties	528	23.8	1,624	73.1	69	3.1
Cities	137	60.3	73	32.2	17	7.5
Clerks:						
Units	679	48.9	695	50.0	15	1.1
Counties	823	37.1	1,360	61.2	38	1.7
Cities	132	58.1	87	38.3	8	3.5

1/ Refer to page 20 for recommended minimum staffing requirements.

2/ A total of 1,389 health organizations, covering 2,229 counties, submitted the Report of Public Health Personnel as of December 31, 1953. Of the total organizations, 227 were city health departments.

Of the four types of personnel to which population ratios were applied, the extent of personnel shortages was much more pronounced in nursing personnel than in the other three types. (Clinic nurses were included in computing the availability of nursing personnel.) While almost 92 percent of all reporting units had some nurses, only 5 percent had a sufficient number to meet the minimum requirement. Three percent, or 44 units, were without any full-time nursing personnel as of December 31, 1953. The proportion of the cities meeting the minimum ratio was higher than for counties.

Likewise, the proportion of cities employing sufficient sanitation workers to meet minimum requirements was higher than that shown for counties. Included in this group of workers were engineers, veterinarians, professionally trained sanitarians, and nongraduate personnel performing sanitation activities. Sixty percent of the cities reporting met the ratio of 1 sanitarian for every 15,000 persons. Only about 24 percent of the counties met this ratio. Few units did not report any sanitation workers on the staff at the end of the reporting year.

About half the units employed clerical workers in sufficient numbers to meet the recommended minimum requirement. Furthermore, almost all the remaining units employed some clerks although not in the ratio of 1 per 15,000 population. The complete absence of clerical personnel was indicated in only one percent of all reporting units.

Between 1952 and 1953, no improvement was noted in the employment of physicians, nurses, and sanitation workers in sufficient numbers to meet the generally accepted minimum personnel population ratios. Rather the proportion of reported units, counties, and cities meeting the ratios for these three personnel categories was lower in 1953 than in 1952. Conversely, the percentage of units and of cities with at least the minimum number of clerks was slightly higher in 1953 than in 1952.

Analysis was also made of the staffing situation to determine the additional physicians, nurses, sanitarians, and clerks needed to staff each unit in accordance with these minimum staffing requirements. As shown in table 10, these deficiencies amounted to 1,720 physicians, 15,436 nurses, 3,032 sanitation workers, and 2,629 clerks.

Approximately 60 percent, or 849, of the reporting units needed additional physicians to meet minimum staffing requirements. Although no actual count was made of vacancies in health officer positions as indicated in the reports, it is known that temporary vacancies account for a sizable portion of the organizations deficient in medical personnel.

In 95 percent of the reporting units, additional nursing personnel was required to meet the minimum ratio. In 23 States every reporting unit was deficient in nurses. These data point up the fact that the extreme shortage in this staff category is very widespread.

The shortages in sanitation workers and clerical personnel were reflected in 60 and 51 percent of all reporting units, respectively. Comparison of 1953

Table 10.--Number of Additional Full-Time Health Agency Personnel of Each Designated Type Needed in Each State to Staff Reporting Health Organizations According to Recommended Minimum Staffing Requirements 1/, and Number of Organizations with Deficiencies in Each Type of Personnel
December 31, 1953

State	Total number of organizations reporting	Physicians		Nurses		Sanitation personnel		Clerks	
		Additional needed	Organizations deficient	Additional needed	Organizations deficient	Additional needed	Organizations deficient	Additional needed	Organizations deficient
Totals	1,389	1,720	849	15,436	1,315	3,032	840	2,629	708
Alabama	67	49	36	415	67	53	37	71	41
Arizona	8	13	8	103	7	20	5	26	7
Arkansas	27	30	23	250	27	69	24	41	19
California	52	76	36	1,156	45	125	28	42	17
Colorado	11	14	7	91	10	8	5	11	6
Connecticut	15	6	5	85	12	26	12	23	10
Delaware	4	3	2	26	3	8	2	11	3
Dist. of Columbia	1	-	-	46	1	-	-	-	-
Florida	40	28	15	318	37	33	17	39	15
Georgia	55	41	35	248	52	65	41	27	17
Idaho	5	7	5	29	5	14	5	10	3
Illinois	34	109	19	1,295	31	366	30	287	22
Indiana	15	73	11	617	15	170	10	208	14
Iowa	9	48	9	349	9	141	7	148	8
Kansas	15	15	11	111	15	11	9	22	13
Kentucky	117	93	89	347	105	73	58	19	12
Louisiana	60	54	43	356	59	27	20	15	13
Maine	10	9	6	111	10	36	9	38	8
Maryland	24	19	7	119	18	43	13	13	4
Massachusetts	21	62	17	516	18	118	14	111	17
Michigan	45	66	24	571	44	108	36	91	34
Minnesota	13	48	10	450	12	130	10	112	10
Mississippi	58	18	18	228	58	37	31	21	15
Missouri	35	67	28	583	34	97	22	107	21
Montana	5	-	-	7	4	4	3	4	3
Nebraska	4	9	4	64	4	1	1	8	3
Nevada	2	-	-	19	2	2	1	6	2
New Hampshire	1	1	1	2	1	-	-	3	1
New Jersey	80	120	78	513	71	152	41	121	20
New Mexico	10	8	5	99	10	25	9	10	2
New York	39	161	33	1,084	36	196	26	57	15
North Carolina	69	24	23	370	67	87	51	81	48
North Dakota	8	7	7	28	5	8	5	10	5
Ohio	74	84	36	1,113	72	163	44	238	59
Oklahoma	27	13	10	239	27	31	20	37	18
Oregon	17	9	6	130	17	27	14	29	12
Pennsylvania	28	64	21	599	26	114	15	80	21
Rhode Island	7	13	6	121	7	31	6	32	6
South Carolina	49	27	27	228	46	37	25	37	24
South Dakota	2	2	2	18	2	2	1	3	1
Tennessee	57	41	37	360	57	58	38	35	28
Texas	47	64	25	823	47	54	22	111	38
Utah	6	13	5	35	6	10	3	24	6
Vermont	*	*	*	*	*	*	*	*	*
Virginia	48	18	13	366	48	48	21	41	19
Washington	19	23	12	190	18	20	10	31	15
West Virginia	28	27	20	254	28	51	23	48	21
Wisconsin	20	44	14	346	19	131	15	87	11
Wyoming	1	-	-	8	1	2	1	3	1

1/ Refer to page 20 for recommended minimum staffing requirements.

* Vermont has no full-time health organizations rendering local health service.

data with similar data for 1952, indicates an appreciable increase in the number of organizations with staffing deficiencies as well as in the number of additional employees needed. However, the data are not entirely comparable, because the State health districts organized primarily for supervisory and advisory services were not included in the computations of staffing deficiencies for 1952. Such districts were considered when computing staffing deficiencies based on 1953 data and account for a large portion of the increased personnel needs indicated.

Personnel Employed by Official Agencies Other Than Health Agencies

Public health personnel employed full time by other official agencies performing local public health services totaled 9,262 as of December 31, 1953. These employees represented slightly less than one-fifth of all full-time public health personnel employed by tax-supported agencies and were reported by local health units in 43 States and the District of Columbia. (See table 11.) For the most part the official agencies other than health agencies employing public health personnel include boards of education, welfare departments, the Department of Agriculture, the Bureau of Indian Affairs, and governmental hospital commissions or boards (exclusive of Army, Navy, Veterans Administration, and Public Health Service Hospitals).

A high proportion of these workers--43 percent--were serving in local areas of California and New York. Other States in which relatively large numbers of personnel were employed by official agencies other than health agencies included New Jersey, Pennsylvania, Illinois, Massachusetts, and Texas.

The proportion of workers of various types employed by official agencies other than health varied considerably from that shown for official health agency staffs. Participation of other official agencies in school health programs is indicated particularly in the high proportion of nurses, dentists, and dental hygienists employed. Nurses comprised more than 60 percent of all public health employees of other governmental agencies. These nurses for the most part are school nurses employed by boards of education.

The total number of dental hygienists, psychologists, and psychiatric social workers reported as "other official agency" personnel was larger in each instance than the number reported as official health agency employees.

Comparison with 1952 data reflects an increase of 567 full-time public health workers engaged in health services sponsored by official agencies other than health departments. Because some reports have indicated inconsistent reporting of such personnel from year to year, it is not possible to determine that the larger figure represents actual increase in its entirety.

Table 11.--Number of Full-Time Public Health Workers of Different Classifications Employed by Other Official Agencies Rendering Some Type of Health Service in Local Areas with Full-Time Health Organization
December 31, 1953

STATE	Total	Public health physician	Public health nurses	Clinic nurses	Public health dentists	Dental hygienists	Engineers	Professional sanitarians	Other sanitation personnel	Veterinarians	Laboratory personnel	Health educators	Nutritionists	Medical social workers	Psychiatric social workers	Psychologists	Analysts and statisticians	Public health investigators	X-ray technicians	Physical therapists	Administrative management personnel	Clerks	Maintenance and service personnel	All others
Totals	9,262	281	5,878	94	107	411	45	104	88	45	417	118	72	110	128	186	12	12	42	90	23	450	224	325
Alabama	7	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	1	-	-	-	-
Arizona	123	1	97	1	-	1	-	-	-	-	2	-	-	-	3	2	-	-	-	2	-	9	5	-
Arkansas	2	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
California	1,964	128	1,177	8	25	20	21	36	5	2	31	18	7	38	67	57	-	-	6	23	2	132	37	124
Colorado	107	3	74	-	2	1	-	-	-	-	1	11	-	1	-	-	-	-	-	1	-	10	-	3
Connecticut	134	4	57	8	7	19	-	-	-	-	-	2	8	2	-	5	-	-	1	-	4	6	5	6
Delaware	41	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dist. of Columbia	37	-	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Florida	49	-	17	-	-	-	-	-	-	-	11	-	-	2	3	4	-	-	-	2	-	4	6	-
Georgia	5	-	2	-	-	-	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
Idaho	9	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Illinois	504	7	290	4	6	2	-	6	47	1	5	1	5	3	4	3	1	-	5	2	1	69	25	17
Indiana	138	4	68	3	3	3	-	-	-	-	-	8	-	11	-	1	-	2	-	5	-	11	7	12
Iowa	49	-	30	4	1	1	2	-	1	-	-	-	-	-	5	5	-	-	-	-	-	-	-	-
Kansas	58	-	56	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kentucky	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	171	3	2	13	-	-	-	-	-	-	3	-	2	1	4	3	-	-	1	-	2	10	69	58
Maine	30	-	24	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-
Maryland	52	1	29	-	1	-	-	-	1	4	4	1	-	-	3	2	-	1	-	-	-	4	-	1
Massachusetts	368	5	304	-	-	5	2	2	1	-	-	19	2	-	-	-	-	-	-	2	2	9	-	15
Michigan	106	2	66	1	3	4	-	2	5	-	1	1	-	-	1	-	-	-	3	11	-	4	-	2
Minnesota	297	5	226	5	10	17	-	-	3	-	-	1	1	5	2	1	-	-	3	2	-	9	-	7
Mississippi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Missouri	192	10	152	2	1	-	1	13	2	-	-	-	1	1	2	-	-	1	-	4	-	2	-	-
Montana	12	2	-	1	1	1	-	-	1	-	-	-	-	-	2	2	-	-	-	-	-	2	-	-
Nebraska	91	5	37	10	-	-	2	-	1	-	1	9	1	3	3	2	1	-	1	9	-	5	-	1
Nevada	8	-	7	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Jersey	847	9	647	20	8	13	6	-	-	1	25	8	4	3	5	17	2	-	12	3	5	32	14	13
New Mexico	80	2	61	-	-	-	3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
New York	2,032	33	1,098	3	11	267	3	11	6	31	328	22	28	14	4	51	4	-	1	8	1	42	51	15
North Carolina	24	1	1	-	-	1	-	-	-	-	-	-	-	5	4	3	-	-	1	-	-	6	-	2
North Dakota	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ohio	213	5	147	4	7	8	-	-	-	-	-	5	2	-	-	1	1	2	2	2	2	12	-	13
Oklahoma	49	-	43	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	2	-	-
Oregon	15	1	12	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Pennsylvania	629	35	504	5	12	27	-	2	4	3	1	2	1	6	1	5	3	2	1	2	-	13	-	-
Rhode Island	51	-	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
South Carolina	42	-	20	-	2	-	-	-	1	-	-	-	1	3	2	1	-	-	-	-	3	8	-	1
South Dakota	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tennessee	25	2	18	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	1	1
Texas	338	5	261	-	1	3	2	4	8	1	1	4	6	-	2	7	-	-	1	1	-	15	1	15
Utah	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Vermont	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Virginia	100	2	76	-	5	-	-	7	-	-	-	1	-	-	1	1	-	-	1	-	-	3	-	3
Washington	143	4	74	-	-	3	2	8	1	-	3	-	1	9	2	3	-	-	1	3	1	19	2	7
West Virginia	45	1	30	-	-	6	-	-	-	-	-	1	2	-	-	1	-	-	-	-	-	4	-	-
Wisconsin	71	1	33	-	-	7	1	-	-	-	-	3	-	1	6	7	-	-	-	5	-	2	-	5
Wyoming	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Vermont has no full-time health organizations rendering local health service.

SUMMARY

A total of 1,389 health organizations providing local health services submitted the Report of Public Health Personnel as of December 31, 1953. These units served 2,229 counties and included 227 cities. The combined population residing in organized areas totaled almost 142 million, or 88.8 percent of the total estimated population of the country.

Although the trend has been toward the organization of health units on a district rather than a single county basis, the latter type of organization continues to be the most prevalent type of unit. Slightly more than 56 percent of all reporting organizations were of the single county type. These units included approximately 35 percent of the organized counties reported and one-third of the total population of the country.

Reports reflect need for the development of local health units to serve more populous areas. About 54 percent of the organizations submitting reports covered areas of less than 50,000 population.

Although some growth in the full-time staffs of local health departments has been evidenced during the past few years, the increases are not proportionate to the growth in population occurring within these years. The ratios of full-time public health personnel to population residing in organized areas are very low and continue to decline. Minimum staffing deficiencies in local health departments approximated 1,700 physicians, 15,400 nurses, 3,000 sanitation workers, and 2,600 clerical workers. These shortages were distributed on a unit basis as follows: 60 percent of the reporting units needed additional physicians; 95 percent additional nurses; 60 percent additional sanitarians; and 51 percent additional clerks.

APPENDIX

Comparison of Coverage of the Country by Full-Time Local Health Organizations for Selected Years[1/]

Year	Organized Areas				Unorganized Areas	
	Number of organizations	Number of counties included	Population covered	Percent of total population covered	Population represented	Percent of total population in unorganized areas
1954	1,434	2,218	141,682,700	88.7	17,995,800	11.3
1953	1,365	2,197	137,874,000	88.4	18,056,100	11.6
1952	1,383	2,184	136,536,800	88.4	17,882,600	11.6
1951	1,353	2,105	129,600,000	86.0	21,064,000	14.0
1950	1,348	2,088	129,073,100	86.1	20,782,400	13.9
1947	1,284	1,874	113,501,800	81.5	25,715,500	18.5
1935	886	762	74,133,300	56.3	57,535,900	43.7

1/ Coverage data for 1947 and subsequent years compiled from annual Directory of Full-Time Local Health Officers (Units); data for 1935 - Kratz, F. W., Status of Full-Time Local Health Organization at the End of the Fiscal Year 1941-1942. Pub. Health Rep., 58:345-351 (1943). Reprint No. 2454.

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